FundaMakers

GEOMETRY

(Ref: FM-QAH2022013)

Quadrilateral & Polygons

1. The measures of the angles of a quadrilateral taken in order are proportional to 1:2:3:4, then the quadrilateral is:

a) parallelogram	b) trapezium
c) rectangle	d) rhombus

- 2. Find the measure of largest angle of a quadrilateral if the measures of its interior angles are in the ratio of 3:4:5 :6 :
 a) 60° b) 120° c) 90° d) CBD
- ABCD is a parallelogram, P and Q are the points on the diagonal AC such that AP = QC, then guadrilateral BPDQ is a:

a) trapezium	b) parallelogram
c) square	d) none of these

4. In a parallelogram ABCD, bisectors of consecutive angles A and B intersect at P. Find the measure of ∠APB:
a) 90°

a) 90°	b) 60°
c) 120°	d) data insufficient

In the given figure AE = BC and AE || BC and the three sides AB, CD and ED are equal in length. If m ∠A =102°, find measures of ∠BCD :



- 6. □ ABCD is a parallelogram. m ∠DAB = 30°, BC = 20 cm and AB = 20 cm. Find the area of parallelogram:
 a) 150 cm²
 b) 200 cm²
 c) 400 cm²
 d) 260 cm²
- 7. The length of a side of a rhombus is 10 m and one of its diagonal is 12 m. The length of the other diagonal is
 a) 15 m b) 18 m c) 16 m d) CBD
- 8. If ABCD is a parallelogram in which P and Q are the centroids of MBD and ABM then, PQ equals :
 a) AQ
 b) AP
 c) BP
 d) DQ
- 9. If a rectangle and a parallelogram are equal in area and have the same base and are situated on the same side, then the ratio of perimeter of rectangle and that of parallelogram is k, then k is :
 a) k>1 b) i<<1

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c) k =1	 d) can't be determined

- 10. Diagonals of a parallelogram are 8 m and 6 m respectively. If one of side is 5m, then the area of parallelogram is :
 - a) $18 m^2$ b) $30 m^2$ c) $24 m^2$ d) $48 m^2$
- 11.A square and a rhombus have the same base a rhombus is inclined at 30°. What is the ratio of area of the square to the area of the rhombus : a) $\sqrt{2}$: 1 b) 2: 1 c) 1: 1 d) 2: $\sqrt{3}$
- 12. Fin d the area of a quadrilateral with sides 28 cm and one of its diagonal is 26 cm
 a) 450 cm²
 b) 360 cm²
 c) 540 cm²
 d) 720 cm²
- 13. If ABCD is a rhombus, then :a) $AC^2 + BD^2 = 4AB^2$ b) $AC^2 + BD^2 = AB^2$ c) $AC^2 + BD^2 = 2AB^2$ d) $2(AC^2 + BD^2) = 3AB^2$
- 14.□ABCD is a parallelogram, AB =14 cm, BC =18 and AC =16 cm. Find the length of the other diagonal:
 a) 24 cm
 b) 28 cm
 c) 36 cm
 d) 32 cm
- 15.Each interior angle of a regular polygon is 140°. The number of sides is :
 a) 10 b) 8 c) 6 d) 9
- 16. If one of the interior angles of a regular polygon is equal to 5/6 times of one of the interior angles of a regular pentagon, then the number of sides of the polygon is :
 a) 3 b) 4 c) 6 d) 8
- 17. The sum of the interior angles of a polygon is 1260°. The number of sides of the polygon is : a) 6 b) 7 c) 8 d) 9
- 18.If each interior angle of a regular polygon is 3 times its exterior angle, the number of sides of the polygon is :
 - a) 4 b) 5 c) 6 d) 8
- 19. Difference between the interior and exterior angles of regular polygon is 60°. The number of sides in the polygon is:
 a) 6 b) 6 c) 8 d) 9
- 20.A polygon has54 diagonals. The number of sides in the polygon is :

a) 7 b) 9 c) 12 d) none

21. The ratio between the number sides of two regular polygon 1:2 and the ratio between their interior angle is 3:4. The number of sides of these polygons are respectively :

a) 3, 6 b) 4;8 c) 6, 9 d) 5, 10



22. The sum of all the interior angles of a regular polygon is four times the sum of its exterior angles. The polygon is :

a) hexagon	b) triangle
c) decagon	d) nonagon

23.ABCDE is a regular pentagon. O is a point inside the pentagon such that AOB is an equilateral triangle. What is ∠OEA?



24. Triangle has perimeter of $6 + 2\sqrt{3}$. One of the angles in the triangle is equal to the exterior angle of a regular hexagon another angle is equal to the exterior angle of a regular 12-sided polygon. Find area of the triangle.

a) 2√3	b) √3	c) √3/2	d) 3
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25. The adjoining figure shows a set of concentric squares. If the diagonal of the innermost square is 2 units, and if the distance between the corresponding corners of any two successive squares is 1 unit, find the difference between the areas of the eighth and the seventh square, counting from the innermost square



26. Two sides of a plot measure 32 m and 24 m and the angle between them is a perfect right angle. The other two sides measure 25 m each and the other three angles are not right angles. What is the area of the plot?



Answer Kev

a) 768 m²

c) 696.5 m²

a) 36

27. In the adjoining figure, AC + AB = 5 AD and AC - AD = 8. Then the area of the rectangle ABCD is



- 28.What is the ratio of longest diagonal to the shortest diagonal in a regular octagon? a) $\sqrt{3}$: 1 b) 2: 1 c) 2: $\sqrt{3}$ d) $\sqrt{2}$: 1
- 29. Sides of a parallelogram are in the ratio 5 : 4. Its area is 1000 sq. units. Altitude on the greater side is 20 units. Altitude on the smaller side is

a) 30 units b) 25 units c) 10 units d) 15 units

- 30.Area of a Rhombus of perimeter 56 cms is 100 sqcms. Find the sum of the lengths of its diagonals.
 a) 33.40
 b) 34.40
 c) 31.20
 d) 32.30
- 31.In a trapezium ABCD, AB and DC are parallel sides and ∠ ADC = 90°. If AB = 15 cm, CD = 40 cm and diagonal AC = 41 cm. Then the area of the trapezium ABCD is a) 245 cm² b) 240 cm² c) 247.5 cm² d) 250 cm²
- 32.Rhombus of side 6 cm has an angle equal to the external angle of a regular octagon. Find the area of the rhombus. a) 18 $\sqrt{2}$ cm² b) 9 $\sqrt{2}$ cm²

c) $15\sqrt{2}$ cm ² d) $12\sqrt{2}$ cm ²		b) 9 v2 cm-
	c) 15√2 cm²	d) 12√2 cm²

- 33.Consider Regular Hexagon H inscribed in circle C, what is ratio of the areas of H and C? Consider Circle C inscribed in Regular Hexagon H, what is ratio of the areas of H and C?
 a) 2√3 : 3π, 3√3 : 4π
 - b) 3√3 : π, 3√3 : 4π
 - c) 3√3 : 2π, 2√3 : π
 - d) √3 : π, √3 : 4 π
- 34.A square, whose side is 2 metres, has its corners cut a way so as to form an octagon with all sides equal. Then the length of each side of the octagon, in metres is



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1. B	2. B	3. B	4. A	5. B	6. B	7. C	8. B	9. A	10. C
11. B	12. A	13. B	14. D	15. B	16. D	17. D	18. A	19. C	20. B
21. C	22. A	23. A	24. B	25. D	26. C	27. D	28. B	29. B	30. C
31. A	32. C	33. B							